

Claims

[c1] A liquid-jet head, including a passage-forming substrate in which a pressure generating chamber communicating with a nozzle orifice ejecting a liquid is defined, and a piezoelectric element composed of a lower electrode, a piezoelectric layer and an upper electrode on one surface of the passage-forming substrate with a vibration plate interposed therebetween, the liquid-jet head comprising: a sealing plate joined towards a piezoelectric element side of the passage-forming substrate and having a piezoelectric element holding portion, the sealing plate hermetically sealing a space secured in a region facing to the piezoelectric element in such a way that it does not hinder a movement thereof,
wherein:

at least a part of a peripheral portion of the piezoelectric element holding portion of the sealing plate is joined to the passage-forming substrate via a glass joining layer made of glass, and the glass joining layer is formed over an inner surface of the piezoelectric element holding portion.

[c2] The liquid-jet head according to claim 1, wherein the

glass constituting the glass joining layer contains a gettering agent for trapping moisture.

- [c3] The liquid-jet head according to claim 2, wherein the gettering agent contains phosphorous.
- [c4] The liquid-jet head according to claim 1, wherein the glass constituting the glass joining layer contains a filler.
- [c5] The liquid-jet head according to claim 4, wherein the filler is made of at least one kind selected from a group including titania, zirconia and alumina.
- [c6] A liquid-jet apparatus comprising the liquid-jet head according to claim 1.